

Work Order ID 105289

105289

Page 1

August-01-13 11:22:34 AM

Item ID: 646.9710

Accept

N9000040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: Body

Start Date: 8/01/13

Start Qty: 5.00

5

Cust Item ID:

Required Date: 8/01/13

Req'd Qty: 5.00

5

Customer:

Reference:

Approvals:

Process Plan: ML5

Date: 13-08-01

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run Start *NR1*

Stop *NR2*

| Sequence ID/ Work Center ID | Operation Description | Set Up/ Run Hours | Tool ID | Tool # | Plan Code | Accept Qty | Reject Qty | Reject Number | Insp. Stamp |
|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
| Draw Nbr | Revision Nbr | | | | | | | | |
| 646.9700 | REV B | | | | | | | | |

100

0.00

100

BAND SAW

0.00

Bandsaw

Memo

Jcaspa Bandsaw

Cut Blank at 7.425"

B.A 13/08/07

5 0

DAS
08
0-09

110

0.00

110

HAAS CNC VERTICAL MACHINING #1

0.00

HAAS 1

Memo

HAAS CNC vertical machine #1

1-Machine per folio FB130

DWG REV: B

FOLIO REV: AA

B.A 13/08/07

5 0

DAS
08
0-09

2- deburr and break all sharp edges

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: _____ Date: _____

QA Closed: _____ Date: _____

| | | | | | | | | | | | | | | | | | | |
|--|---|---|--------------------------------------|------------------------------------|------------------------------------|--------------------------------------|------------------------------------|------------------------------------|--|----------------------------------|--|------------------------------------|--|--------------------------------|------------------------------------|------------------------------------|-----------------------------------|--|
| Work Order: _____ Part No. _____ NCR No. _____ | DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/> | AGAINST DEPARTMENT/PROCESS <table style="width: 100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table> | Skid-tube <input type="checkbox"/> | Crosstube <input type="checkbox"/> | Water Jet <input type="checkbox"/> | Engineering <input type="checkbox"/> | Machining <input type="checkbox"/> | Small Fab <input type="checkbox"/> | Prod. Eng. Coord. <input type="checkbox"/> | Quality <input type="checkbox"/> | Thermoforming <input type="checkbox"/> | Finishing <input type="checkbox"/> | Rec/Store/Packaging <input type="checkbox"/> | Other <input type="checkbox"/> | Large Fab <input type="checkbox"/> | Composite <input type="checkbox"/> | Supplier <input type="checkbox"/> | |
| Skid-tube <input type="checkbox"/> | Crosstube <input type="checkbox"/> | Water Jet <input type="checkbox"/> | Engineering <input type="checkbox"/> | | | | | | | | | | | | | | | |
| Machining <input type="checkbox"/> | Small Fab <input type="checkbox"/> | Prod. Eng. Coord. <input type="checkbox"/> | Quality <input type="checkbox"/> | | | | | | | | | | | | | | | |
| Thermoforming <input type="checkbox"/> | Finishing <input type="checkbox"/> | Rec/Store/Packaging <input type="checkbox"/> | Other <input type="checkbox"/> | | | | | | | | | | | | | | | |
| Large Fab <input type="checkbox"/> | Composite <input type="checkbox"/> | Supplier <input type="checkbox"/> | | | | | | | | | | | | | | | | |

| Root Cause | Date | Step | Qty | Description of work order update or Non-conformance | Initial Chief Eng | Action Description | Sign & Date | Verification | QC Inspector |
|---------------|------|------|-----|---|-------------------|--------------------|-------------|--------------|--------------|
| Doc/Data | | | | | | | | | |
| Equip/Tooling | | | | | | | | | |
| Operator | | | | | | | | | |
| Material | | | | | | | | | |
| Setup | | | | | | | | | |
| Other | | | | | | | | | |
| Process | | | | | | | | | |
| Supplier | | | | | | | | | |
| Training | | | | | | | | | |
| Unapproved | | | | | | | | | |

FAULT CATEGORY

| Landing Gear | General | Other | Other |
|---|---|--|---|
| <input type="checkbox"/> Bending | <input type="checkbox"/> Bend | <input type="checkbox"/> Grain | <input type="checkbox"/> Ovalized |
| <input type="checkbox"/> Centre Not Concentric to O/S | <input type="checkbox"/> BOM/Route | <input type="checkbox"/> Hardware | <input type="checkbox"/> Over/Under tolerance |
| <input type="checkbox"/> Cracks | <input type="checkbox"/> Broken/Damaged | <input type="checkbox"/> Inspection Incomplete | <input type="checkbox"/> Part Incorrect |
| <input type="checkbox"/> Crushed/Crimped | <input type="checkbox"/> Burrs | <input type="checkbox"/> Instructions Incomplete/Unclear | <input type="checkbox"/> Part Lost/Missing |
| <input type="checkbox"/> Cuffs | <input type="checkbox"/> Contamination | <input type="checkbox"/> Maintenance | <input type="checkbox"/> Part Moved |
| <input type="checkbox"/> Heat Treat | <input type="checkbox"/> Countersink | <input type="checkbox"/> Mislabeled | <input type="checkbox"/> Positioned Wrong |
| <input type="checkbox"/> Inspection Strip in Tube | <input type="checkbox"/> Cut Too Short | <input type="checkbox"/> Misread | <input type="checkbox"/> Power Loss/Surge |
| <input type="checkbox"/> Ripples in Bend | <input type="checkbox"/> Drill Holes | <input type="checkbox"/> Offset | <input type="checkbox"/> Pressure/Forced |
| <input type="checkbox"/> Torque Waves in Extrusion | <input type="checkbox"/> Drawing | <input type="checkbox"/> Out of Calibration | <input type="checkbox"/> Temperature/Cure |
| <input type="checkbox"/> Turning Sequence | <input type="checkbox"/> Finish | <input type="checkbox"/> Out of Sequence | <input type="checkbox"/> Weld |
| <input type="checkbox"/> Wave/Twist in Tube | <input type="checkbox"/> Folio | <input type="checkbox"/> Outside Dimensions | <input type="checkbox"/> Wrong Stock Pulled |
| | | | <input type="checkbox"/> Other |

Work Order ID 105289

105289

Page 2

August-01-13 11:22:34 AM

Item ID: 646.9710 Accept *N900040100* Setup Start *NS1*
 Revision ID: Stop *NS2*
 Item Name: Body
 Start Date: 8/01/13 Start Qty: 5.00 *5* Cust Item ID:
 Required Date: 8/01/13 Req'd Qty: 5.00 *5* Customer:
 Reference:

Approvals: Process Plan: Date: Tooling: Date: Run Start *NR1*
 QC: Date: SPC (Y/N): Date: Stop *NR2*

| Sequence ID/ Work Center ID | Operation Description | Set Up/ Run Hours | Tool ID | Tool # | Plan Code | Accept Qty | Reject Qty | Reject Number | Insp. Stamp |
|--------------------------------|--|----------------------|---------|--------|--------------|---------------|---------------|------------------|------------------------------|
| 120 | QC2- Inspect parts off machine FAI/FAIB | 0.00 | | | | | | | |
| *120* | | | | | | | | | |
| QC | Memo | 0.00 | | | | | | | DAS 08 9-89 |
| Quality Control | | | | | | | | | |
| 130 | QC8- Inspect parts - second check | 0.00 | | | | | | | |
| *130* | | | | | | | | | |
| QC | Memo | 0.00 | | | | | | | (DAS 44 9-89) 13/08/08 |
| Quality Control | | | | | | | | | |
| 131 | | 0.00 | | | | | | | |
| *131* | | | | | | | | | |
| HandFinish | Memo | 0.00 | | | | | | | CL 13/08/14 |
| Hand Finishing | Clean & remove markings (acid etch only) | | | | | | | | N/A - see e-mail attached |

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: _____ Date: _____

QA Closed: _____ Date: _____

| | | | | | | | | | | | | | | | | | | |
|--|---|---|--------------------------------------|------------------------------------|------------------------------------|--------------------------------------|------------------------------------|------------------------------------|--|----------------------------------|--|------------------------------------|--|--------------------------------|------------------------------------|------------------------------------|-----------------------------------|--|
| Work Order: _____ Part No. _____ NCR No. _____ | DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/> | AGAINST DEPARTMENT/PROCESS <table style="width: 100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table> | Skid-tube <input type="checkbox"/> | Crosstube <input type="checkbox"/> | Water Jet <input type="checkbox"/> | Engineering <input type="checkbox"/> | Machining <input type="checkbox"/> | Small Fab <input type="checkbox"/> | Prod. Eng. Coord. <input type="checkbox"/> | Quality <input type="checkbox"/> | Thermoforming <input type="checkbox"/> | Finishing <input type="checkbox"/> | Rec/Store/Packaging <input type="checkbox"/> | Other <input type="checkbox"/> | Large Fab <input type="checkbox"/> | Composite <input type="checkbox"/> | Supplier <input type="checkbox"/> | |
| Skid-tube <input type="checkbox"/> | Crosstube <input type="checkbox"/> | Water Jet <input type="checkbox"/> | Engineering <input type="checkbox"/> | | | | | | | | | | | | | | | |
| Machining <input type="checkbox"/> | Small Fab <input type="checkbox"/> | Prod. Eng. Coord. <input type="checkbox"/> | Quality <input type="checkbox"/> | | | | | | | | | | | | | | | |
| Thermoforming <input type="checkbox"/> | Finishing <input type="checkbox"/> | Rec/Store/Packaging <input type="checkbox"/> | Other <input type="checkbox"/> | | | | | | | | | | | | | | | |
| Large Fab <input type="checkbox"/> | Composite <input type="checkbox"/> | Supplier <input type="checkbox"/> | | | | | | | | | | | | | | | | |

| Root Cause | Date | Step | Qty | Description of work order update or Non-conformance | Initial Chief Eng | Action Description | Sign & Date | Verification | QC Inspector |
|---------------|------|------|-----|---|-------------------|--------------------|-------------|--------------|--------------|
| Doc/Data | | | | | | | | | |
| Equip/Tooling | | | | | | | | | |
| Operator | | | | | | | | | |
| Material | | | | | | | | | |
| Setup | | | | | | | | | |
| Other | | | | | | | | | |
| Process | | | | | | | | | |
| Supplier | | | | | | | | | |
| Training | | | | | | | | | |
| Unapproved | | | | | | | | | |

FAULT CATEGORY

| Landing Gear | General | Other |
|---|---|--|
| <input type="checkbox"/> Bending | <input type="checkbox"/> Bend | <input type="checkbox"/> Grain |
| <input type="checkbox"/> Centre Not Concentric to O/S | <input type="checkbox"/> BOM/Route | <input type="checkbox"/> Hardware |
| <input type="checkbox"/> Cracks | <input type="checkbox"/> Broken/Damaged | <input type="checkbox"/> Inspection Incomplete |
| <input type="checkbox"/> Crushed/Crimped | <input type="checkbox"/> Burrs | <input type="checkbox"/> Instructions Incomplete/Unclear |
| <input type="checkbox"/> Cuffs | <input type="checkbox"/> Contamination | <input type="checkbox"/> Maintenance |
| <input type="checkbox"/> Heat Treat | <input type="checkbox"/> Countersink | <input type="checkbox"/> Misabeled |
| <input type="checkbox"/> Inspection Strip in Tube | <input type="checkbox"/> Cut Too Short | <input type="checkbox"/> Misread |
| <input type="checkbox"/> Ripples in Bend | <input type="checkbox"/> Drill Holes | <input type="checkbox"/> Offset |
| <input type="checkbox"/> Torque Waves in Extrusion | <input type="checkbox"/> Drawing | <input type="checkbox"/> Out of Calibration |
| <input type="checkbox"/> Turning Sequence | <input type="checkbox"/> Finish | <input type="checkbox"/> Out of Sequence |
| <input type="checkbox"/> Wave/Twist in Tube | <input type="checkbox"/> Folio | <input type="checkbox"/> Outside Dimensions |
| | | <input type="checkbox"/> Ovalized |
| | | <input type="checkbox"/> Over/Under tolerance |
| | | <input type="checkbox"/> Part Incorrect |
| | | <input type="checkbox"/> Part Lost/Missing |
| | | <input type="checkbox"/> Part Moved |
| | | <input type="checkbox"/> Positioned Wrong |
| | | <input type="checkbox"/> Power Loss/Surge |
| | | <input type="checkbox"/> Pressure/Forced |
| | | <input type="checkbox"/> Temperature/Cure |
| | | <input type="checkbox"/> Weld |
| | | <input type="checkbox"/> Wrong Stock Pulled |
| | | <input type="checkbox"/> Other |

Work Order ID 105289

105289

Page 3

August-01-13 11:22:34 AM

Item ID: 646.9710

Accept

N900040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: Body

Start Date: 8/01/13

Start Qty: 5.00

5

Cust Item ID:

Required Date: 8/01/13

Req'd Qty: 5.00

5

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run Start *NR1*

Stop *NR2*

| Sequence ID/ Work Center ID | Operation Description | Set Up/ Run Hours | Tool ID | Tool # | Plan Code | Accept Qty | Reject Qty | Reject Number | Insp. Stamp |
|--------------------------------|---|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
| 140 | Outsource process-Anodize per QSI017 4.1.10.1 | 0.00 | | | | | | | |
| *140* | | | | | | | | | |
| Outsource4 | Memo | 0.00 | | | | | | | |
| Outsource process - Anodize | Issue P/O to ATG : 20929 | | | | | | | | |
| | 1- Black Anodize as per Dwg 646.9700 | | | | | | | | |
| | 2- PRIME AS PER DWG, SEE NOTE #2 | | | | | | | | |
| | Certification of Conformity is required | | | | | | | | |
| 150 | Receive & Inspect for Damage & Mat'l Certs | 0.00 | | | | | | | |
| *150* | | | | | | | | | |
| Packaging | Memo | 0.00 | | | | | | | |
| Packaging | | | | | | | | | |
| 155 | QC5- Inspect part completeness to step on W/O | 0.00 | | | | | | | |
| *155* | | | | | | | | | |
| QC | Memo | 0.00 | | | | | | | |
| Quality Control | | | | | | | | | |

CZ 1.3/08/14 (5)

P43/8/20 (5)

S

DAS
27
9-89

B. 8 30

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: _____ Date: _____

QA Closed: _____ Date: _____

| | | | | | | | | | | | |
|--|------|------|-----|---|-------------------|---|-------------|--------------|--------------|--|--|
| Work Order: _____ Part No. _____ NCR No. _____ | | | | DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/> | | AGAINST DEPARTMENT/PROCESS <div style="display: flex; justify-content: space-between;"> <div> Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/> </div> <div> Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/> </div> <div> Water Jet <input type="checkbox"/> Prod. Eng. Coord. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/> </div> <div> Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/> </div> </div> | | | | | |
| Root Cause | Date | Step | Qty | Description of work order update or Non-conformance | Initial Chief Eng | Action Description | Sign & Date | Verification | QC Inspector | | |
| Doc/Data <input type="checkbox"/> | | | | | | | | | | | |
| Equip/Tooling <input type="checkbox"/> | | | | | | | | | | | |
| Operator <input type="checkbox"/> | | | | | | | | | | | |
| Material <input type="checkbox"/> | | | | | | | | | | | |
| Setup <input type="checkbox"/> | | | | | | | | | | | |
| Other <input type="checkbox"/> | | | | | | | | | | | |
| Process <input type="checkbox"/> | | | | | | | | | | | |
| Supplier <input type="checkbox"/> | | | | | | | | | | | |
| Training <input type="checkbox"/> | | | | | | | | | | | |
| Unapproved <input type="checkbox"/> | | | | | | | | | | | |

| FAULT CATEGORY | | | | |
|---|---|---|---|---|
| Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube | General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio | <input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions | <input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge _____ _____ _____ | <input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other |

Work Order ID 105289

105289

Page 4

August-01-13 11:22:34 AM

Item ID: 646.9710

Accept

N900040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: Body

Start Date: 8/01/13

Start Qty: 5.00

5

Cust Item ID:

Required Date: 8/01/13

Req'd Qty: 5.00

5

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run Start *NR1*

Stop *NR2*

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

180

Identify as per dwg & Stock Location: MF

0.00

180

Packaging

Memo

0.00

Packaging

IDENTIFY AS PER APICAL MPP-120 BY STAMPING P# AND REV

5x

SP
13-8-30

190

QC21- Final Inspection - Work Order Release

0.00

190

QC

Memo

0.00

Quality Control

13/9/30

13-05-30

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: _____ Date: _____

QA Closed: _____ Date: _____

| | | | | | | | | | | | |
|--|-------------|-------------|------------|---|--------------------------|---|------------------------|---------------------|---------------------|--|--|
| Work Order: _____ Part No. _____ NCR No. _____ | | | | DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/> | | AGAINST DEPARTMENT/PROCESS <div style="display: flex; justify-content: space-between;"> <div> Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/> </div> <div> Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/> </div> <div> Water Jet <input type="checkbox"/> Prod. Eng. Coord. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/> </div> <div> Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/> </div> </div> | | | | | |
| Root Cause | Date | Step | Qty | Description of work order update or Non-conformance | Initial Chief Eng | Action Description | Sign & Date | Verification | QC Inspector | | |
| Doc/Data <input type="checkbox"/> | | | | | | | | | | | |
| Equip/Tooling <input type="checkbox"/> | | | | | | | | | | | |
| Operator <input type="checkbox"/> | | | | | | | | | | | |
| Material <input type="checkbox"/> | | | | | | | | | | | |
| Setup <input type="checkbox"/> | | | | | | | | | | | |
| Other <input type="checkbox"/> | | | | | | | | | | | |
| Process <input type="checkbox"/> | | | | | | | | | | | |
| Supplier <input type="checkbox"/> | | | | | | | | | | | |
| Training <input type="checkbox"/> | | | | | | | | | | | |
| Unapproved <input type="checkbox"/> | | | | | | | | | | | |

| FAULT CATEGORY | | | | | | | | | |
|---|---|--|---|---|--|--|--|--|--|
| Landing Gear | | | General | | | | | | |
| <input type="checkbox"/> Bending | <input type="checkbox"/> Bend | <input type="checkbox"/> Grain | <input type="checkbox"/> Ovalized | <input type="checkbox"/> Pressure/Forced | | | | | |
| <input type="checkbox"/> Centre Not Concentric to O/S | <input type="checkbox"/> BOM/Route | <input type="checkbox"/> Hardware | <input type="checkbox"/> Over/Under tolerance | <input type="checkbox"/> Temperature/Cure | | | | | |
| <input type="checkbox"/> Cracks | <input type="checkbox"/> Broken/Damaged | <input type="checkbox"/> Inspection Incomplete | <input type="checkbox"/> Part Incorrect | <input type="checkbox"/> Weld | | | | | |
| <input type="checkbox"/> Crushed/Crimped | <input type="checkbox"/> Burrs | <input type="checkbox"/> Instructions Incomplete/Unclear | <input type="checkbox"/> Part Lost/Missing | <input type="checkbox"/> Wrong Stock Pulled | | | | | |
| <input type="checkbox"/> Cuffs | <input type="checkbox"/> Contamination | <input type="checkbox"/> Maintenance | <input type="checkbox"/> Part Moved | | | | | | |
| <input type="checkbox"/> Heat Treat | <input type="checkbox"/> Countersink | <input type="checkbox"/> Mislabeled | <input type="checkbox"/> Positioned Wrong | | | | | | |
| <input type="checkbox"/> Inspection Strip in Tube | <input type="checkbox"/> Cut Too Short | <input type="checkbox"/> Misread | <input type="checkbox"/> Power Loss/Surge | <input type="checkbox"/> Other | | | | | |
| <input type="checkbox"/> Ripples in Bend | <input type="checkbox"/> Drill Holes | <input type="checkbox"/> Offset | | | | | | | |
| <input type="checkbox"/> Torque Waves in Extrusion | <input type="checkbox"/> Drawing | <input type="checkbox"/> Out of Calibration | | | | | | | |
| <input type="checkbox"/> Turning Sequence | <input type="checkbox"/> Finish | <input type="checkbox"/> Out of Sequence | | | | | | | |
| <input type="checkbox"/> Wave/Twist in Tube | <input type="checkbox"/> Folio | <input type="checkbox"/> Outside Dimensions | | | | | | | |

Picklist Print

August-01-13 11:22:34 AM

Page 1

Work Order ID: 105289
Parent Item: 646.9710
Parent Item Name: Body

Start Date: 8/01/13 Required Date: 8/01/13
Start Qty: 5.00 Required Qty: 5.00

Comments: IPP REV:A NEW ISSUE 12/10/04 JFS VERIFY BY: DD

| Component Item ID/ Item Name | Replacement Item ID | Mfg/ Purch | Bin Item | Primary Location | Last Location | Route Seq ID | Unit of Measure | Qty on Hand | Qty per Kit | Total Qty | Qty Issued | Date Issued | Status |
|--|------------------------|---------------|-------------|---------------------|------------------|-----------------|--------------------|-----------------|-------------|--------------|---------------|----------------|--------|
| M7075T6B5.000X1.000 7075-T6 BAR 5.000" X 1.000" | | Purchased | No | | | 100 | f | 18.7810 | 0.62 | 3.2631579 | | L.A. 13/08/07 | |
| | | | | <u>Location</u> | | <u>Loc Qty</u> | | <u>Loc Code</u> | | | | | |
| | | | | MAT008 | | 18.781 | | | | | | | |
| | | | | → M125997 | | 18.781 | | | 3.2631 ft | | | | |

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: _____ Date: _____

QA Closed: _____ Date: _____

| | | | | | | | | | | | |
|--|------|------|-----|---|-------------------|---|-------------|--------------|--------------|--|--|
| Work Order: _____ Part No. _____ NCR No. _____ | | | | DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/> | | AGAINST DEPARTMENT/PROCESS <div style="display: flex; justify-content: space-between;"> <div> Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/> </div> <div> Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/> </div> <div> Water Jet <input type="checkbox"/> Prod. Eng. Coord. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/> </div> <div> Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/> </div> </div> | | | | | |
| Root Cause | Date | Step | Qty | Description of work order update or Non-conformance | Initial Chief Eng | Action Description | Sign & Date | Verification | QC Inspector | | |
| Doc/Data <input type="checkbox"/> | | | | | | | | | | | |
| Equip/Tooling <input type="checkbox"/> | | | | | | | | | | | |
| Operator <input type="checkbox"/> | | | | | | | | | | | |
| Material <input type="checkbox"/> | | | | | | | | | | | |
| Setup <input type="checkbox"/> | | | | | | | | | | | |
| Other <input type="checkbox"/> | | | | | | | | | | | |
| Process <input type="checkbox"/> | | | | | | | | | | | |
| Supplier <input type="checkbox"/> | | | | | | | | | | | |
| Training <input type="checkbox"/> | | | | | | | | | | | |
| Unapproved <input type="checkbox"/> | | | | | | | | | | | |

| FAULT CATEGORY | | | | |
|---|---|---|--|---|
| Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube | General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio | <input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions | <input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge | <input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other |

| | | |
|--|---------------------|--------------------|
| DART AEROSPACE LTD | Work Order: | 05289 |
| Description: Body | Part Number: | 646.9710 |
| Inspection Dwg: 646.9700 Rev: B | | Page 1 of 2 |

FIRST ARTICLE INSPECTION CHECKLIST

| Drawing Dimension | Tolerance | Actual Dimension | Accept | Reject | Method of Inspection | Comments |
|-------------------|-----------------|------------------|--------|--------|----------------------|----------|
| 0.13 x 45° | +/-0.010 x 0.5° | 0.125 x 45° | ✓ | | Vern | 6A-01 |
| 1.500 | +/-0.005 | 1.500 | ✓ | | " | " |
| 0.352 | +0.005/-0.000 | 0.352 | ✓ | | " | " |
| 0.10 x 45° | +/-0.010 x 0.5° | 0.107 x 45° | ✓ | | " | " |
| 0.875 | +/-0.005 | 0.879 | ✓ | | Mic | 6A-03 |
| 0.700 | +/-0.005 | 0.700 | ✓ | | Vern | 6A-01 |
| 5.500 | +/-0.005 | 5.500 | ✓ | | " | " |
| 0.660 | +/-0.005 | 0.660 | ✓ | | " | " |
| 0.660 | +/-0.005 | 0.660 | ✓ | | " | " |
| 0.278 | +/-0.002 | 0.278 | ✓ | | H-6 | 31006 |
| 0.339 | +/-0.002 | 0.339 | ✓ | | " | " |
| 0.352 | +/-0.002 | 0.352 | ✓ | | " | " |
| 0.372 | +/-0.002 | 0.372 | ✓ | | " | " |
| 1.067 | +/-0.002 | 1.067 | ✓ | | " | " |
| 2.608 | +/-0.002 | 2.608 | ✓ | | " | " |
| 2.750 | +/-0.002 | 2.750 | ✓ | | " | " |
| 2.892 | +/-0.002 | 2.892 | ✓ | | " | " |
| 3.348 | +/-0.002 | 3.348 | ✓ | | " | " |
| 3.597 | +/-0.002 | 3.597 | ✓ | | " | " |
| 3.847 | +/-0.002 | 3.846 | ✓ | | " | " |
| 0.351 | +/-0.002 | 0.352 | ✓ | | " | " |
| 0.544 | +/-0.002 | 0.546 | ✓ | | " | " |
| 2.195 | +/-0.002 | 2.195 | ✓ | | " | " |
| 2.304 | +/-0.002 | 2.304 | ✓ | | " | " |
| 2.451 | +/-0.002 | 2.451 | ✓ | | " | " |
| 2.639 | +/-0.002 | 2.639 | ✓ | | " | " |
| 3.395 | +/-0.002 | 3.395 | ✓ | | " | " |
| 3.495 | +/-0.002 | 3.495 | ✓ | | " | " |
| 4.551 | +/-0.002 | 4.551 | ✓ | | " | " |
| 4.595 | +/-0.002 | 4.596 | ✓ | | " | " |
| 4.687 | +/-0.002 | 4.687 | ✓ | | " | " |
| 4.734 | +/-0.002 | 4.735 | ✓ | | " | " |
| 6.651 | +/-0.002 | 6.651 | ✓ | | " | " |

| | | |
|--|---------------------|--------------------|
| DART AEROSPACE LTD | Work Order: | 105289 |
| Description: Body | Part Number: | 646.9710 |
| Inspection Dwg: 646.9700 Rev: B | | Page 2 of 2 |

FIRST ARTICLE INSPECTION CHECKLIST

| Drawing Dimension | Tolerance | Actual Dimension | Accept | Reject | Method of Inspection | Comments |
|-------------------|---------------|------------------|--------|--------|----------------------|----------|
| Ø0.201 | +0.005/-0.001 | Ø 0.201 | ✓ | | Vern | GA-01 |
| Ø0.177 | +0.005/-0.001 | Ø 0.177 | ✓ | | " | " |
| 7.026 | +/-0.005 | 7.027 | ✓ | | H-6 | 31006 |
| 4.245 | +/-0.005 | 4.243 | ✓ | | " | " |

| | | | | | |
|---------------------|-------------|--------------------|----------|------------------------------|--|
| Measured by: | D.A. DAS 08 | Audited by: | 44 08 | Preliminary Approval: | |
| Date: | 13/08/07 | Date: | 13/08/07 | Date: | |

| Rev | Date | Change | Revised by | Approved |
|-----|----------|-----------------|------------|----------|
| A | 13.06.03 | New Issue | KJ | |
| B | 13.07.18 | Dwg Rev updated | KJ | |

APICAL

INDUSTRIES, INC.

DWG NO. 646.9700

REV: A

PREPARED BY:

J. BECKER

DATE: 07/03/13

EFFECT IN DWG
☒ INC. ☐ UNINC.

DWG TITLE: CUTTER SUB ASSY

APPROVED BY:

ENGR: *J. Becker*

MFG

David Baker

QC

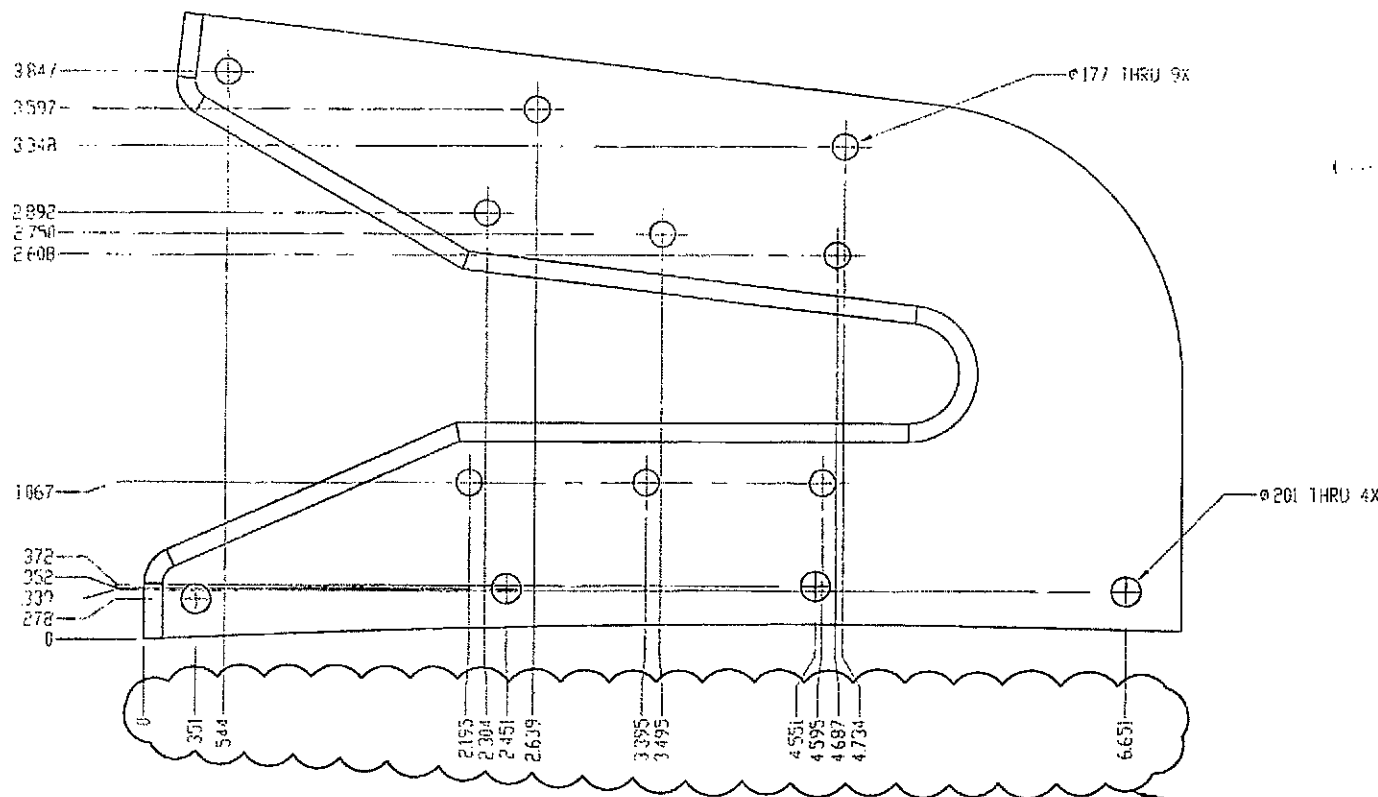
[Signature]

EFF:

CURRENT ORDER

TRANSACTION CODES (TC):
A-ADD C-CREATE
R-REVISE D-DELETE

REASON: ADDED DIMENSIONS. ADDED INSPECTION DIMENSIONS.



105 289 MLJ
13-08-01

SHEET 4, ZONE D5:

WAS

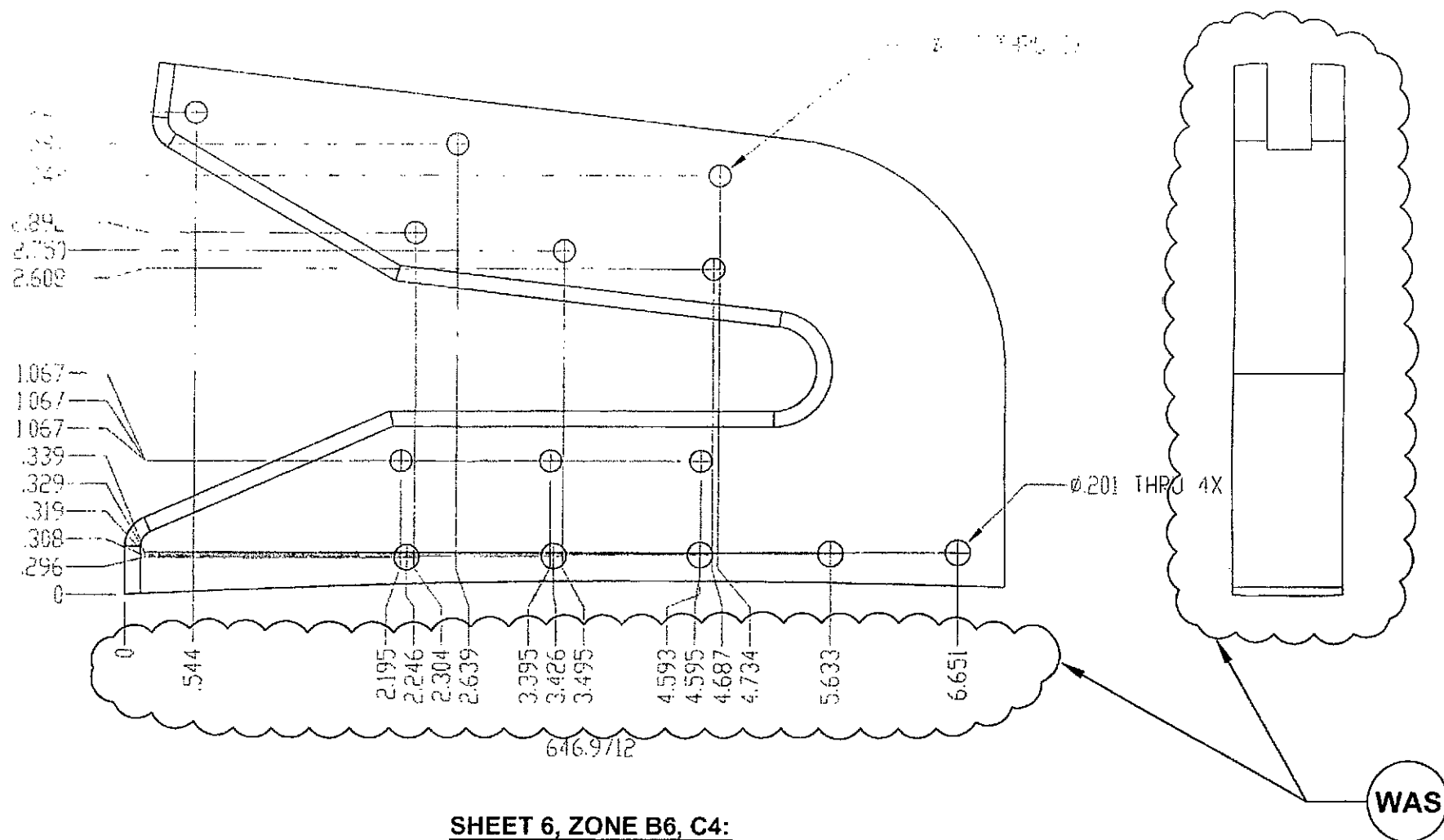
DOCUMENTS EFFECTED:

☐ MDL ☐ INSTALL INSTRU ☐ ICA ☐ BOM

CHANGE CATEGORY
☐ MAJOR ☒ MINOR

DER REVIEW REQUIRED
☐ YES ☒ NO

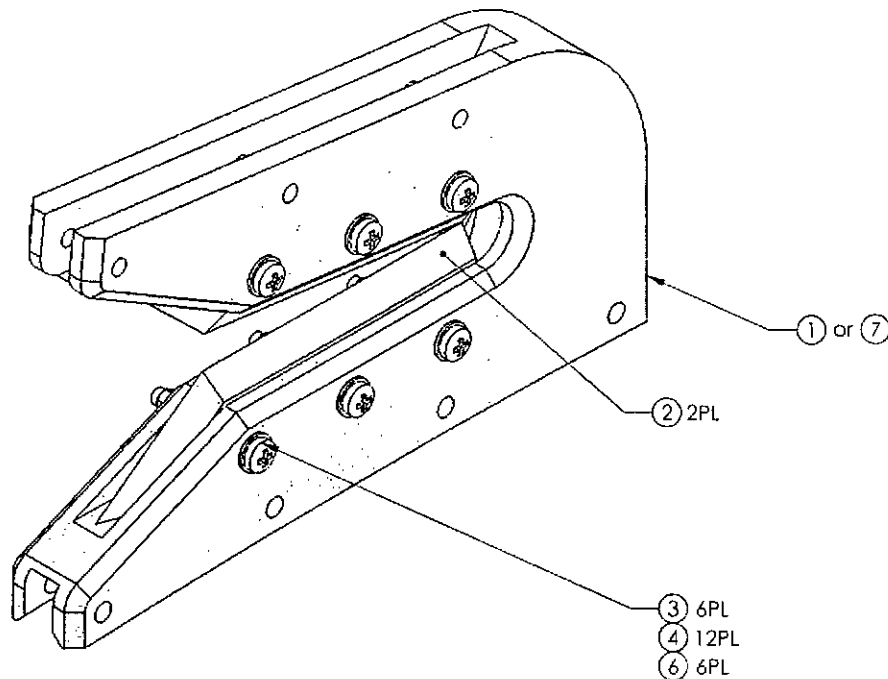
105289



SHEET 6, ZONE B6, C4:

NOTES

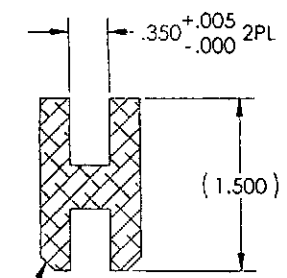
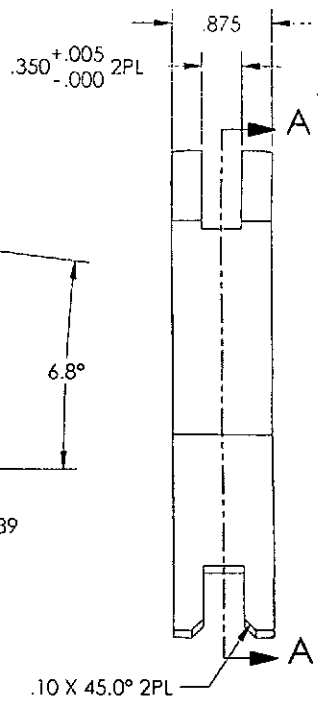
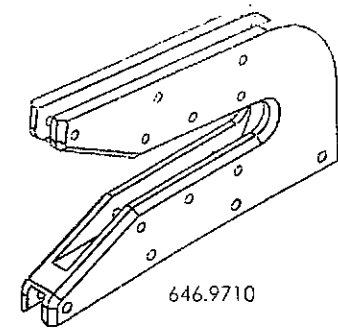
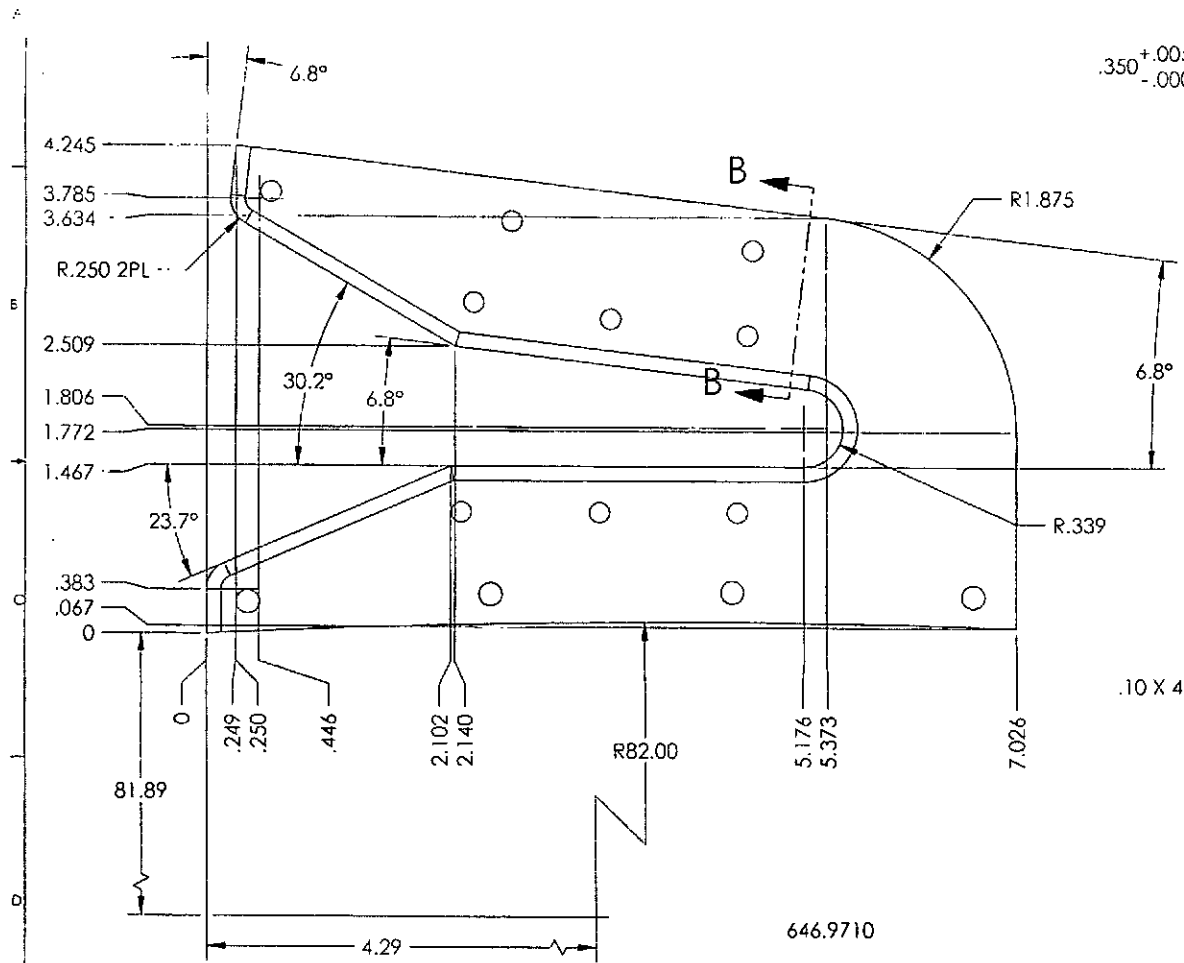
- ① MATERIAL: ALUMINUM 7075-T651 PER AMS-QQ-A-250/12
- ② FINISH: HARD ANODIZE IAW MIL-A-8625 TYPE II, CLASS 2, COLOR BLACK;
PRETREAT PROC DESOTO PR-14B ADHESION PROMOTER;
PRIME IAW MIL-P-23377 J TYPE I CLASS N: 1-2 MIL MAX
- ③ MATERIAL: AISI A2 TOOL STEEL
CONDITION: ANNEALED
POST PROCESS: HEAT TREAT TO 58-62 Rc ROCKWELL HARDNESS
- ④ FINISH: PRIME IAW MIL-P-23377 J TYPE I CLASS N: 1-2 MIL MAX
5. DEBURR AND BREAK ALL SHARP EDGES EXCEPT WHERE OTHERWISE NOTED
6. IDENTIFY IAW MPP-120
- ⑦ APPLY F/N 5 AS REQUIRED TO ALL FAYING SURFACES OF F/N 2 UPON ASSEMBLY
- ⑧ CUTTING EDGE INTENDED TO BE SHARP. DO NOT BREAK SHARP EDGE
- ⑨ ALL DIMENSIONS NOT SPECIFIED ARE CONTROLLED BY 646.9710.



646.9701
or
646.9702

[illegible]

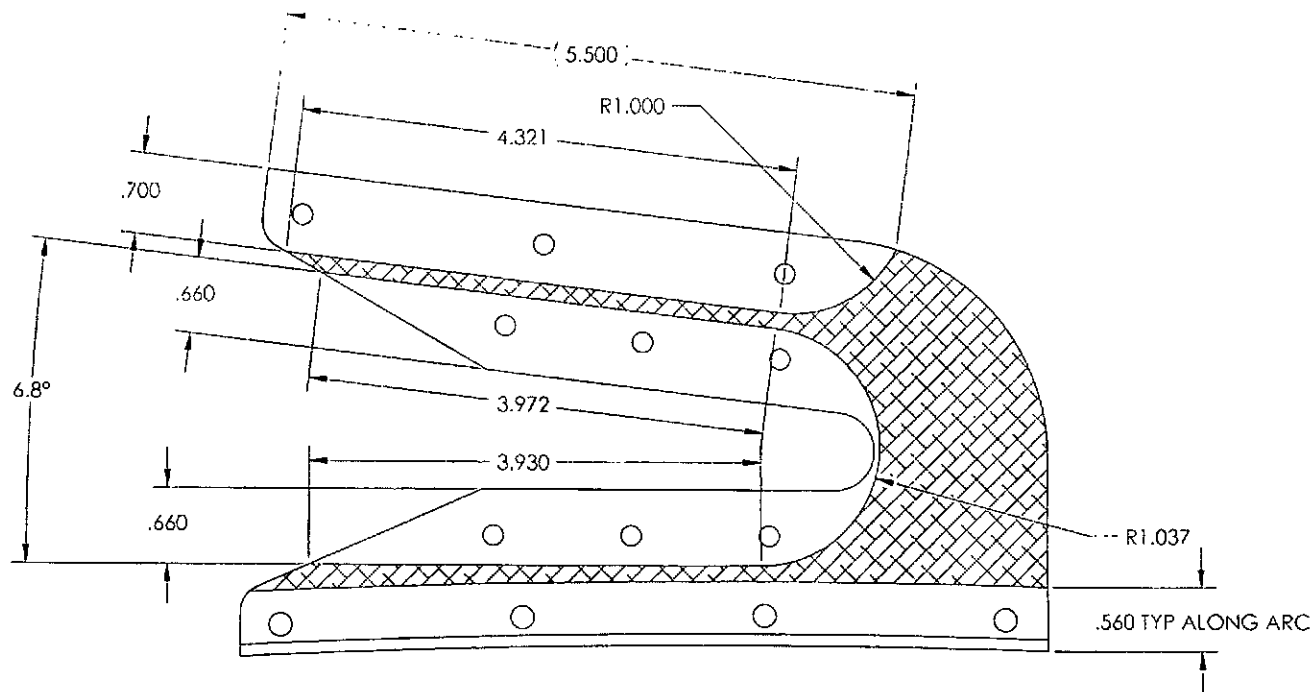
105289



SECTION B-B

| | | | |
|--|----------|--------------|-----|
| APICAL INDUSTRIES 2408 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760) 724-5300 | | | |
| CUTTER SUB ASSY | | | |
| REV | DATE | BY | CHK |
| B | 07/06/88 | 646.9700 | B |
| SCALE: NONE | | SHEET 2 OF 6 | |

105289

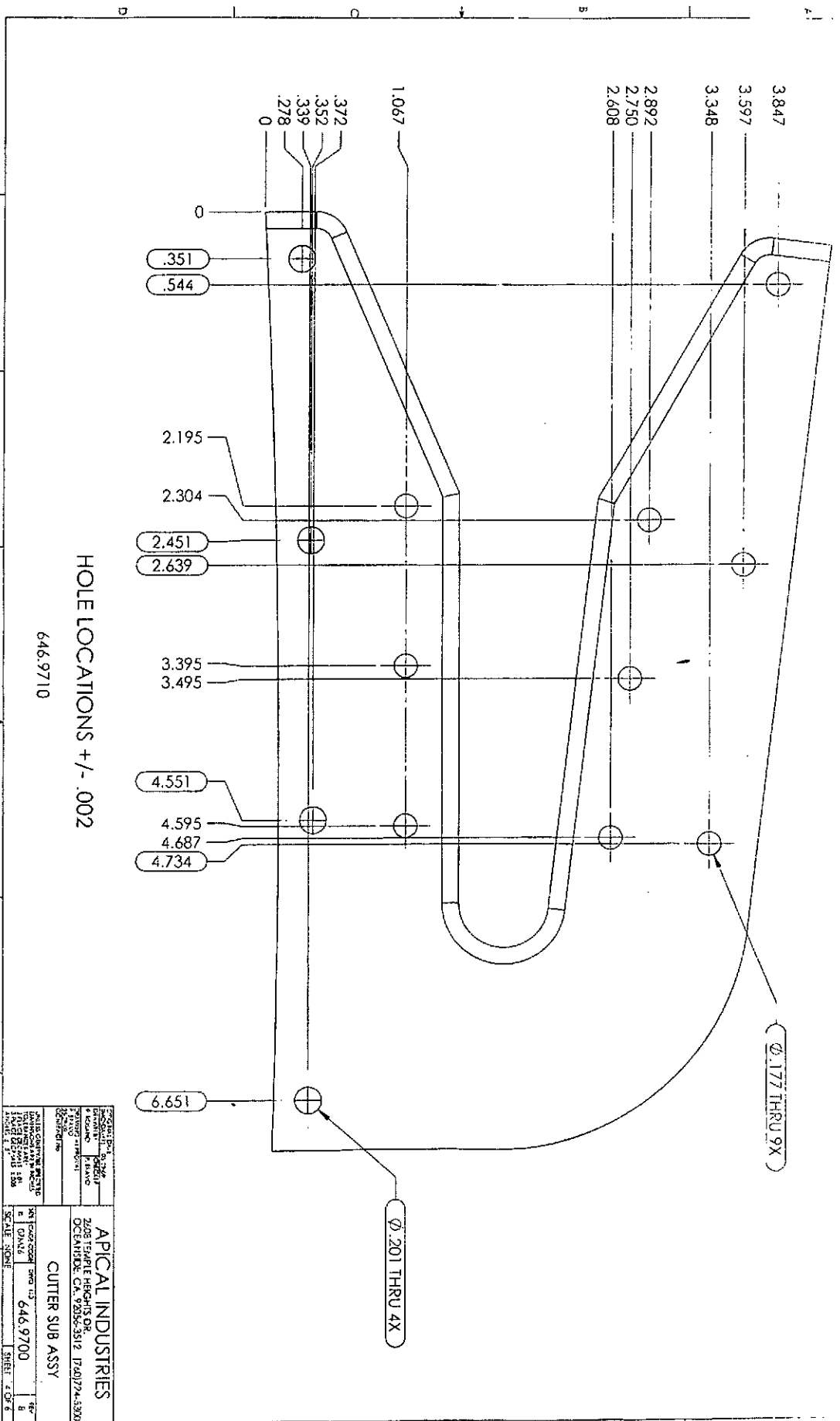


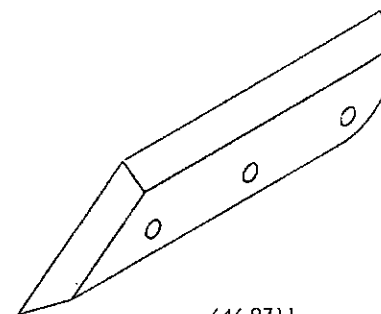
SECTION A-A 2/C6

646.9710

| | | | |
|--|----------|--|-----|
| ORIGINAL DATE (DATE) THE (DATE) DRAWN BY: (NAME) CHECKED BY: (NAME) DESIGNED BY: (NAME) APPROVED BY: (NAME) DATE: (DATE) | | APICAL INDUSTRIES 2408 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92054-3512 (760)724-5300 | |
| UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES DECIMALS ARE TO BE FRACTIONS OF 16 ANGLES TO 1/2° | | CUTTER SUB ASSY | |
| REV | DATE | BY | APP |
| 1 | 07/12/00 | 646.9700 | B |
| SCALE: NONE | | SHEET 3 OF 5 | |

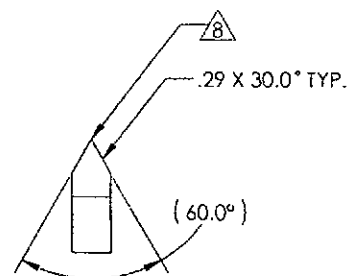
105285

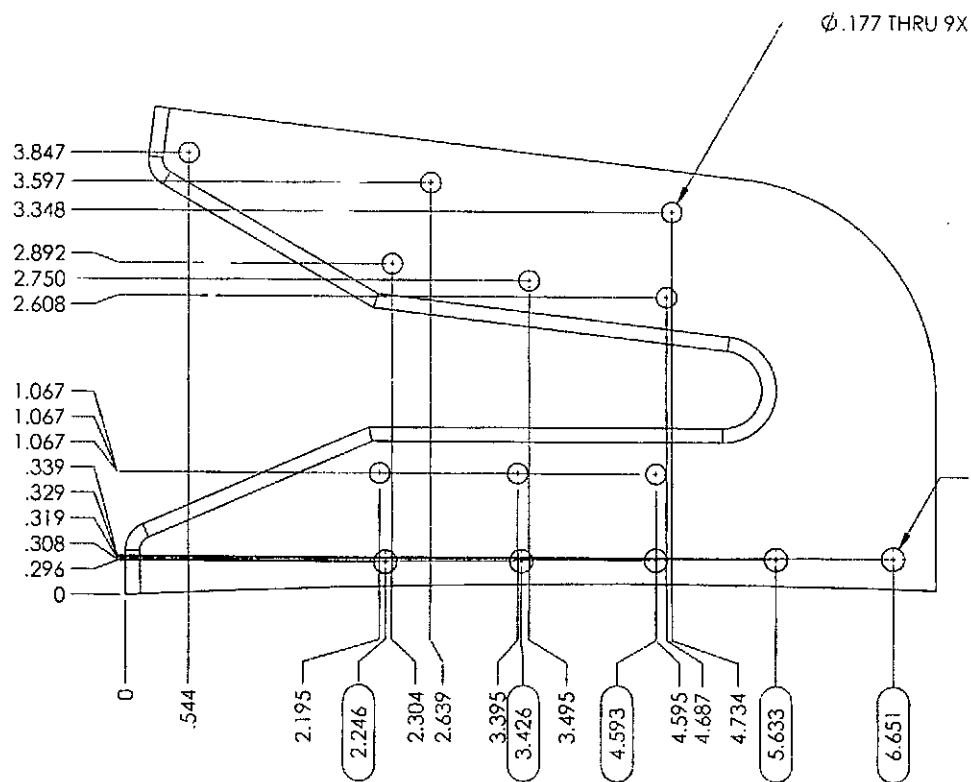




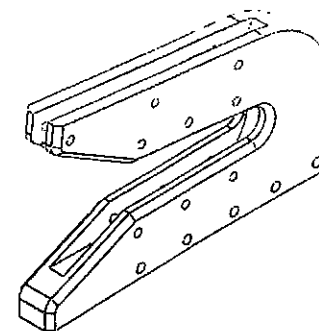
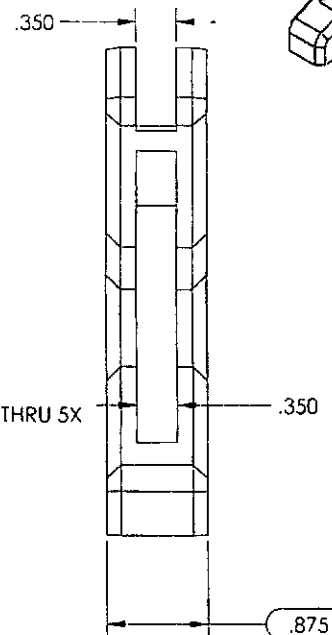
Technical drawing of a mechanical part with the following dimensions and annotations:

- Top horizontal dimension: 3.200
- Top right horizontal dimension: .702
- Left vertical dimension: .250
- Top left annotation: $\varnothing .177$ THRU 3X
- Top left angle: 37.2°
- Right side vertical dimensions (from top to bottom): .691, .750, .985
- Bottom horizontal dimensions (from left to right): (1.500), 1.200, 1.200, .600
- Bottom right radius: R.750
- Bottom total horizontal dimension: (4.500)

[illegible]

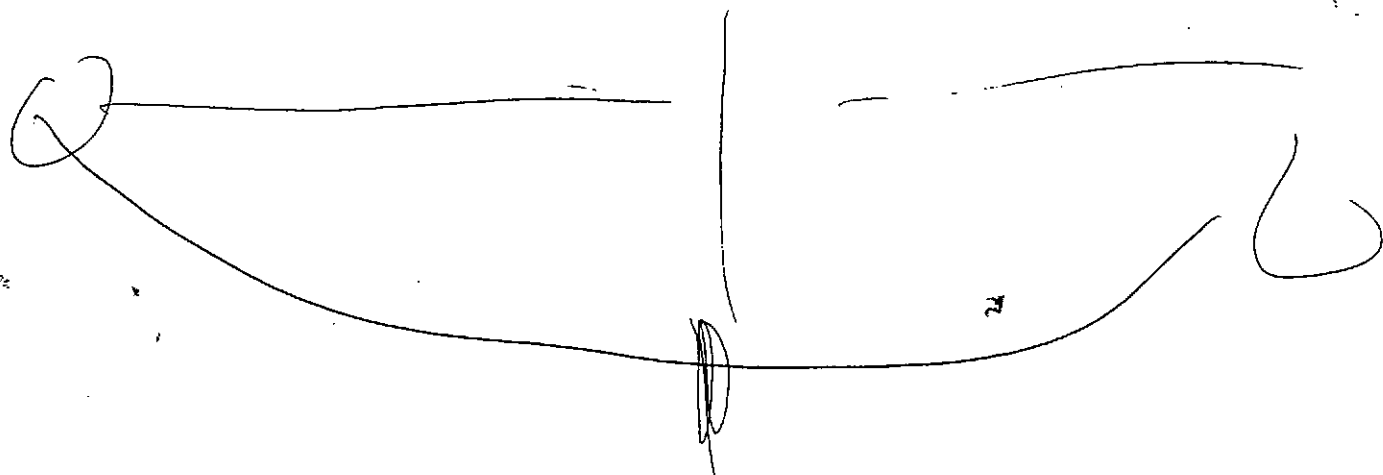


646.9712



646.9712 $\triangle 9$

| | | | |
|--|--|---|---------------|
| DESIGNED BY: 05-28-09 DRAWN BY: 05-28-09 P. 05-28-09 CHECKED BY: 05-28-09 CONSTRUCTION: | | APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760) 724-5300 | |
| 1. UNLESS OTHERWISE SPECIFIED 2. DIMENSIONS ARE IN INCHES 3. TOLERANCES ARE: 4. HOLE LOCATIONS: .001 5. HOLE DIAMETERS: .000 6. ANGLES: .5° | | CAT CODE: 646.9700 REV: B SCALE: NONE | SHEET: 5 OF 6 |



Chantal Lavoie

From: Nigel Forbes
Sent: Wednesday, August 14, 2013 8:05 AM
To: Chantal Lavoie
Subject: ATG

Hi,
As discussed, all parts going to ATG do not require cleaning prior to the delivery. ATG will clean and prepare the parts prior processing.
Thanks1

Nigel



A.T.G. Industries Inc.
731, rue Industrielle Rd.
PLATING DEPARTMENT
Rockland, On K4K 1T2
Canada

Ph: (613) 446-4544

Fax: (613) 446-4556

Pack List

Number: 62596

Date: 30-Aug-13

To

DART AEROSPACE LTD
1270 ABERDEEN ST.
HAWKESBURY, ON K6A 1K7
Canada

Ship To

DART AEROSPACE LTD
1270 ABERDEEN ST.
HAWKESBURY, ON K6A 1K7
Canada

Ph: 613-632-5200

Fax: 613-632-1185

Ph: 613-632-5200

Fax: 613-632-1185

| Terms | | Ship Via | |
|---|---|----------|-------|
| Quantity | Description | | |
| 1 lot | Part: ASST 10 PCS 646.3012 4 PCS 646.3310 6 PCS 646.3312 20 PCS 646.3610 11 PCS 646.3812 12 PCS 647.5710 <u>23 PCS 646.9710</u> 5+18 5 PCS 647.9711 14 PCS 646.9712 HARD ANODIZE BLACK MIL-A-8625 TYPE III CLASS 2 PRIME MIL-P-23377J TYPE I CLASS N Job: 20130542 PO: 20929 | Rev: | Line: |
| Certificate of Conformance | | | |
| A.T.G. Industries certifies that all items in this shipment are in conformance with all requirements, specifications and drawings referenced in the purchase order. | | | |
| ISO 9001 : 2008 REGISTERED ATG SALES-2010 TERMS APPLY | | | |
| DATE: <u>30/8/13</u> | | | |
| CERTIFIED SIGNATURE: <u>[Signature]</u> | | | |
| RECEIVER SIGNATURE: _____ | | | |

